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EXAMINER	
MATTIS, JASON E	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/833,864	FONG ET AL.	
	Examiner	Art Unit	
	Jason E. Mattis	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed 5/5/06. Claims 1-20 are currently pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-5 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont et al. (U.S. Publication US 2001/0012279 A1) in view of Kim (U.S. Pat. 6052713) and Farley et al. (U.S. Pat. 6553032).

With respect to claim 1, Haumont et al. discloses a method of operating a wireless communication system **(See the abstract of Haumont et al. for reference to operating wireless communication network)**. Haumont et al. also discloses determining an active set of base stations for servicing the mobile **(See page 5 paragraphs 61-69 and Figure 1 of Haumont et al. for reference to determining which BTS to transmit packets to from the BSC, with the BTS that receive the packets forming an active set of BTS for a mobile station MS)**. Haumont et al.

further discloses downloading a group of blocks of data to a central buffer that services the active set of base stations **(See page 3 paragraph 45 to page 4 paragraph 49 and page 6 paragraph 79 for reference to downloading data packets, which form a group of blocks of data, to a memory 20, with memory 20 being in the form of a buffer that stores packets and for reference to the buffer being included in the base station controller in one embodiment)**. Haumont et al. also discloses for each of the active set of base stations, downloading a plurality of blocks of data from the central buffer **(See page 4 paragraph 50 to page 5 paragraph 61 and Figures 1 and 4 of Haumont et al. for reference to BSC2 transmitting data packets at various times to BTS1 and BTS2 that are determined to be in an active set for an MS1)**. Haumont et al. further discloses that each block of data includes a respective sequence number with the first block including an initial sequence number **(See page 3 paragraph 43 and Figure 2 of Haumont et al. for reference to each packet 10, which is a block of data, including information 14 relating to the identity of a packet that may comprise the number of a packet, with the first packet 10 to be sent to a MS1 including an initial number)**. Haumont et al. also discloses transmitting blocks of data from a serving base station to the mobile station **(See page 4 paragraph 50 for reference to transmitting data from BST1 to MS1)**. Haumont et al. further discloses receiving a sequence number form the mobile station for each block of data successfully received by the mobile station required **(See page 4 paragraphs 51-52, page 6 paragraph 79. and Figure 4 of Haumont et al. for reference to a BTS sending an acknowledgement of the number of a packet that has been received**

by an MS to the BSC, with the acknowledgement being used to determine that a next packet is ready to be sent to the active BTS). Although Haumont et al. does disclose using a plurality of distributed buffer memories in each BTS of the network, Haumont et al. does not disclose that these buffers exist in the embodiment that includes a buffer in the base station controller and that data is downloaded from the central buffer to a respective distributive buffer of each base station. While Haumont et al. discloses download a next block of data based on received acknowledgements, Haumont et al. does not specifically disclose when the sequence number of a block of data successfully received by the mobile station exceeds an initial sequence number by a threshold value, downloading a next plurality of blocks of data from a central buffer to each base station of the active set of base stations.

With respect to claim 13, Haumont et al. discloses a method of managing the contents of a plurality of data buffers in a wireless communication system **(See the abstract of Haumont et al. for reference to managing a wireless communication network that includes data buffers)**. Haumont et al. also discloses receiving a group of blocks of data in a central buffer of a network element that manages a plurality of base stations of a wireless communication system **(See page 3 paragraph 45 to page 4 paragraph 49 and page 6 paragraph 79 for reference to downloading data packets, which form a group of blocks of data, to a memory 20, with memory 20 being in the form of a buffer that stores packets and for reference to the buffer being included in a base station controller that manages a plurality of base transceiver stations in one embodiment)**. Haumont et al. further discloses

downloading a plurality of blocks of data from the central buffer to a plurality of base stations forming an active set of base stations servicing a mobile station **(See page 4 paragraph 50 to page 5 paragraph 61 and Figures 1 and 4 of Haumont et al. for reference to BSC2 transmitting data packets at various times to BTS1 and BTS2 that are determined to be in an active set for an MS1)**. Haumont et al. also discloses that each block of data includes a respective sequence number with the first block including an initial sequence number **(See page 3 paragraph 43 and Figure 2 of Haumont et al. for reference to each packet 10, which is a block of data, including information 14 relating to the identity of a packet that may comprise the number of a packet, with the first packet 10 to be sent to a MS1 including an initial number)**. Haumont et al. further discloses transmitting blocks of data from a serving base station to the mobile station **(See page 4 paragraph 50 for reference to transmitting data from BST1 to MS1)**. Haumont et al. also discloses receiving a sequence number form the mobile station for each block of data successfully received by the mobile station required **(See page 4 paragraphs 51-52, page 6 paragraph 79. and Figure 4 of Haumont et al. for reference to a BTS sending an acknowledgement of the number of a packet that has been received by an MS to the BSC, with the acknowledgement being used to determine that a next packet is ready to be sent to the active BTS)**. Although Haumont et al. does disclose using a plurality of distributed buffer memories in each BTS of the network, Haumont et al. does not disclose that these buffers exist in the embodiment that includes a buffer in the base station controller and that data is downloaded from the central buffer to a respective

distributive buffer of each base station. While Haumont et al. discloses download a next block of data based on received acknowledgements, Haumont et al. does not specifically disclose when the sequence number of a block of data successfully received by the mobile station exceeds an initial sequence number by a threshold value, downloading a next plurality of blocks of data from a central buffer to each base station of the active set of base stations.

With respect to claims 1 and 13, Kim, in the field of communications discloses a base station subsystem of a digital cellular system that includes a central buffer located serving a set of base stations and a distributed buffer located in each of the base stations with data being downloaded from the central buffer to the distributed buffers **(See column 1 lines 15-63, column 3 line 50 to column 4 line 23, and Figure 1 of Kim for reference to a base station subsystem 1 that includes both a base station controller (BSC) 12 and a base station transceiver subsystem (BTS) 14 with data that is to be transmitted by the BTS 14 being first downloaded into a memory of the BSC 12, with this memory being equivalent to a central buffer, and then downloaded from the memory of the BSC 12 to a memory of the BTS 14, with this memory being equivalent to a distributed buffer)**. Using a plurality of distributed buffer memories in each base station of a wireless communication network in addition to a central buffer has the advantage of allowing a base station to directly control the retransmission of a data packet that is not acknowledged as being correctly received by a mobile station without having to again receive the data packet form the base station controller.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Kim, to combine using a plurality of distributed buffer memories in each base station of a wireless communication network in addition to a central buffer, as suggested by Kim, with the system and method of Haumont et al., with the motivation being to allow a base station to directly control the retransmission of a data packet that is not acknowledged as being correctly received by a mobile station without having to again receive the packet form the base station controller.

With respect to claims 5 and 17, Haumont et al. discloses that the mobile station reports the sequence number of a successfully received block of data to its serving base station **(See page 4 paragraphs 51-52, page 6 paragraph 79. and Figure 4 of Haumont et al. for reference to a BTS sending an acknowledgement of the number of a packet that has been received by an MS to a BTS)**. The combination of Haumont et al. and Kim does not disclose determining that the sequence number of the successfully received block exceeds an initial sequence number by a threshold value.

With respect to claims 1, 5, 13, and 17, Farley et al., in the field of communications, discloses using sliding window protocol in a wireless communications system **(See column 2 lines 27-39 of Farley et al. for reference to sliding window protocol)**. Farley et al. also discloses that in sliding window protocol, mobile units send acknowledgements specifying sequence numbers to sending units to acknowledge each packet sent **(See column 2 lines 27-48 of Farley et al. for reference to sending**

acknowledgements specifying sequence numbers of received packets). Farley et al. further discloses that when an acknowledgment received by the sending unit specifies a packet sequence number above a threshold, which is related to a sliding window, the sliding window is moved and the next data packet is downloaded to the mobile unit **(See column 2 lines 27-48 of Farley et al. for reference to this process)**. Using sliding window protocol has the advantage of creating a way to keep a transmission buffer full while only sending an amount of data that a mobile unit can handle.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Farley et al., to combine the use of sliding window protocol, as suggested by Farley et al., with the system and method of base station buffer management disclosed by Haumont et al. and Kim, with the motivation being to create a way to keep the base station transmission buffers full with current data while only sending an amount of data that a mobile unit can handle.

With respect to claims 2 and 14, Haumont et al. also discloses that the central buffer is serviced by a base station controller with the base station controller servicing a plurality of base stations **(See page 4 paragraph 49 and page 6 paragraph 79 and Figure 4 of Haumont et al. for reference to a memory 20 in the form of a buffer that stores packets and for reference to the buffer being included in the base station controller in one embodiment)**.

With respect to claims 3 and 15, Haumont et al. discloses that the central buffer is serviced by a services gateway switching node that services a plurality of base

stations **(See page 3 paragraph 45 and Figure 4 of Haumont et al. for reference to base station controller BSC2 that has an interface to mobile switching center MSC, which is a services gateway switching node, that services the buffer of the BSC2 by downloading packets to the buffer)**.

With respect to claims 4 and 16, Haumont et al. discloses that only one base station of the active set of base stations services forward link transmission to the mobile station at any particular time **(See page 4 paragraph 50 to page 5 paragraph 60 of Haumont et al. for reference to only one BTS transmitting packets to a MS at a give time and for reference to performing a hard handoff meaning that a connection between a MS and a BTS is broken before a connection between a MS and a new BTS is made)**.

4. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont et al. in view Kim and Farley et al. as applied to claims 1-5 and 13-17 above, and further in view of Strawczynski et al. (U.S. Publication 2002/0012334 A1).

With respect to claims 6 and 7, the combination of Haumont et al., Kim, and Farley et al. does not disclose the system supporting the 1xEV-DO standard or the High Speed Downlink Packet Access standard.

With respect to claims 6 and 7, Strawczynski et al., in the field of communications, discloses a wireless communications system compatible with the 1xEV-DO standard and the HSDPA standard **(See page 1 paragraph 12 of Strawczynski et al. for reference to wireless systems using both the 1xEV-DO**

standard and the HSDPA standard). Using the 1xEV-DO standard and the HSDPA standard has the advantage of using currently developed high-speed data rate standards without having to create a new standard.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Strawczynski et al., to combine the use of the 1xEV-DO standard and the use of the HSDPA standard, as suggested by Strawczynski et al., with the forward link data transmission system and method of Haumont et al., Kim, and Farley et al., with the motivation being to use currently developed high-speed data rate standards without having to create a new standard.

5. Claims 8, 11-12, and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont et al. in view of Kim et al.

With respect to claim 8, Haumont et al. discloses a method of managing the contents of a plurality of data buffers in a wireless communication system **(See the abstract of Haumont et al. for reference to managing a wireless communication network that includes data buffers)**. Haumont et al. also discloses receiving a group of blocks of data in a central buffer of a network element that manages a plurality of base stations of a wireless communication system **(See page 3 paragraph 45 to page 4 paragraph 49 and page 6 paragraph 79 for reference to downloading data packets, which form a group of blocks of data, to a memory 20, with memory 20 being in the form of a buffer that stores packets and for reference to the buffer being included in a base station controller that manages a plurality of base**

transceiver stations in one embodiment). Haumont et al. further discloses downloading a plurality of blocks of data from the central buffer to a plurality of base stations forming an active set of base stations servicing a mobile station **(See page 4 paragraph 50 to page 5 paragraph 61 and Figures 1 and 4 of Haumont et al. for reference to BSC2 transmitting data packets at various times to BTS1 and BTS2 that are determined to be in an active set for an MS1)**. Haumont et al. also discloses transmitting blocks of data from a serving base station to the mobile station **(See page 4 paragraph 50 for reference to transmitting data from BST1 to MS1)**. Haumont et al. further discloses determining that a buffer refresh is required **(See page 4 paragraphs 51-52, page 6 paragraph 79. and Figure 4 of Haumont et al. for reference to a BTS sending an acknowledgement of the number of a packet that has been received by an MS to the BSC, with the acknowledgement being used to determine that a next packet is ready to be sent to the active BTS)**. Haumont et al. further discloses downloading a next plurality of blocks of data of the group of blocks of data stored in the central buffer to each base station of the active set of base stations **(See page 4 paragraphs 51-52 and page 6 paragraph of Haumont et al. for reference to transmitting the next packet to be sent from the BSC to the active BTS once an acknowledgement of a previously sent packet has been received by the BSC)**. Although Haumont et al. does disclose using a plurality of distributed buffer memories in each BTS of the network, Haumont et al. does not disclose that these buffers exist in the embodiment that includes a buffer in the base station controller and that data is

downloaded from the central buffer to a respective distributive buffer of each base station.

With respect to claim 18, Haumont et al. discloses a base station controller comprising a packet data serving node interface and at least one base station interface that interfaces the base station controller to a plurality of base station **(See page 3 paragraph 45 and Figure 4 of Haumont et al. for reference to base station controller BSC2 that has an interface to mobile switching center MSC, which is a packet data serving node, and interfaces to base stations BST1, BTS2, and BTS3)**. Haumont et al. also discloses a central buffer **(See page 4 paragraph 49 and page 6 paragraph 79 and Figure 4 of Haumont et al. for reference to a memory 20 in the form of a buffer that stores packets and for reference to the buffer being included in the base station controller in one embodiment)**. Haumont et al. further discloses a digital process that causes the base station to execute software instructions **(See page 3 paragraph 45 to page 6 paragraph 60 and Figures 1 and 4 of Haumont et al. discloses the base station controller processing instructions to perform a method)**. Haumont et al. also discloses storing a group of blocks of data in the central buffer **(See page 3 paragraph 45 to page 4 paragraph 49 and page 6 paragraph 79 for reference to storing data packets, which form a group of blocks of data in the memory 20)**. Haumont et al. further discloses determining an active set of base stations for servicing a mobile station **(See page 5 paragraphs 61-69 and Figure 1 of Haumont et al. for reference to determining which BTS to transmit packets to from the BSC, with the BTS that receive the packets forming an active set of BTS**

for a mobile station MS). Haumont et al. also discloses downloading a plurality of blocks of data of the groups of blocks of data stored in the central buffer to each base station of the active set of base stations **(See page 4 paragraph 50 to page 5 paragraph 61 and Figures 1 and 4 of Haumont et al. for reference to BSC2 transmitting data packets at various times to BTS1 and BTS2 that are determined to be in an active set for an MS1)**. Haumont et al. further discloses that each block of data includes a respective sequence number with the first block including an initial sequence number **(See page 3 paragraph 43 and Figure 2 of Haumont et al. for reference to each packet 10, which is a block of data, including information 14 relating to the identity of a packet that may comprise the number of a packet, with the first packet 10 to be sent to a MS1 including an initial number)**. Haumont et al. also discloses receiving an indication from a serving base station of the active set of base stations that a data refresh is required **(See page 4 paragraphs 51-52, page 6 paragraph 79. and Figure 4 of Haumont et al. for reference to a BTS sending an acknowledgement of the number of a packet that has been received by an MS to the BSC, with the acknowledgement being used to determine that a next packet is ready to be sent to the active BTS)**. Haumont et al. further discloses downloading a next plurality of blocks of data of the group of blocks of data stored in the central buffer to each base station of the active set of base stations **(See page 4 paragraphs 51-52 and page 6 paragraph of Haumont et al. for reference to transmitting the next packet to be sent from the BSC to the active BTS once an acknowledgement of a previously sent packet has been received by the BSC)**. Although Haumont et al.

does disclose using a plurality of distributed buffer memories in each BTS of the network, Haumont et al. does not disclose that these buffers exist in the embodiment that includes a buffer in the base station controller and that data is downloaded from the central buffer to a respective distributive buffer of each base station.

With respect to claims 8 and 18, Kim, in the field of communications discloses a base station subsystem of a digital cellular system that includes a central buffer located serving a set of base stations and a distributed buffer located in each of the base stations with data being downloaded from the central buffer to the distributed buffers **(See column 1 lines 15-63, column 3 line 50 to column 4 line 23, and Figure 1 of Kim for reference to a base station subsystem 1 that includes both a base station controller (BSC) 12 and a base station transceiver subsystem (BTS) 14 with data that is to be transmitted by the BTS 14 being first downloaded into a memory of the BSC 12, with this memory being equivalent to a central buffer, and then downloaded from the memory of the BSC 12 to a memory of the BTS 14, with this memory being equivalent to a distributed buffer)**. Using a plurality of distributed buffer memories in each base station of a wireless communication network in addition to a central buffer has the advantage of allowing a base station to directly control the retransmission of a data packet that is not acknowledged as being correctly received by a mobile station without having to again receive the data packet form the base station controller.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Kim, to combine using a plurality of

distributed buffer memories in each base station of a wireless communication network in addition to a central buffer, as suggested by Kim, with the system and method of Haumont et al., with the motivation being to allow a base station to directly control the retransmission of a data packet that is not acknowledged as being correctly received by a mobile station without having to again receive the packet form the base station controller.

With respect to claims 11 and 19, Haumont et al. discloses that only one base station of the active set of base stations services forward link transmission to the mobile station at any particular time **(See page 4 paragraph 50 to page 5 paragraph 60 of Haumont et al. for reference to only one BTS transmitting packets to a MS at a give time and for reference to performing a hard handoff meaning that a connection between a MS and a BTS is broken before a connection between a MS and a new BTS is made)**.

With respect to claim 12, Haumont et al. also discloses that the central buffer is serviced by a base station controller with the base station controller servicing a plurality of base stations **(See page 4 paragraph 49 and page 6 paragraph 79 and Figure 4 of Haumont et al. for reference to a memory 20 in the form of a buffer that stores packets and for reference to the buffer being included in the base station controller in one embodiment)**.

6. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont et al. in view of Kim as applied to claims 8, 11-12, and 18-19 above, and further in view of Kumar et al. (U.S. Pat. 6507572).

With respect to claims 9 and 10, the combination of Haumont et al. and Kim does not disclose the central buffer supports centralized link layer buffering operations and that the plurality of distributed buffers support distributed link layer buffering operations and the central buffer and the plurality of distributed buffers support the radio link protocol.

With respect to claims 9 and 10, Kumar et al., in the field of communications, discloses a wireless communications system with a central buffer, a queue of the frame selection/distribution function 106, and a plurality of distributed buffers, queues of the base stations 110, that support radio link protocol **(See column 1 lines 22-58 and items 104, 106, and 110 in Figure 1 of Kumar et al. for reference to the wireless communication system supporting a radio link protocol function 104)**. Since the system of Kumar et al. supports radio link protocol, which is a link layer protocol, the central buffer, queue of the frame selection/distribution function 106, and distributed buffers, queues of the base stations 110, both support link layer buffering operations. Using radio link protocol and link layer buffering has the advantage of providing a reliable existing way to control the transmission of data from the central buffer to the distributed buffers.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Kumar et al., to combine the use of radio link

protocol and link layer buffering, as suggested by Kumar et al., with the forward link data transmission system and method of Haumont et al. and Kim, with the motivation being to provide a reliable existing way to control the transmission of data from the central buffer to the distributed buffers.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haumont et al. in view Kim as applied to claims 8, 11-12, and 18-19 above, and in further of Strawczynski et al.

With respect to claim 20, the combination of Haumont et al. and Kim does not disclose that the base station controller supports the 1xEV-DO standard.

With respect to claim 20, Strawczynski et al., in the field of communications, discloses a wireless communications system compatible with the 1xEV-DO standard **(See page 1 paragraph 12 of Strawczynski et al. for reference to wireless systems using the 1xEV-DO standard)**. Using the 1xEV-DO standard has the advantage of using a currently developed high-speed data rate standard without having to create a new standard.

It would have been obvious to one of ordinary skill in the art at the time of the invention, when presented with the work of Strawczynski et al., to combine the use of the 1xEV-DO standard, as suggested by Strawczynski et al., with the forward link data transmission system and method of Haumont et al. and Kim, with the motivation being to use a currently developed high-speed data rate standard without having to create a new standard.

Response to Arguments

8. Applicant's arguments filed 5/5/06 have been fully considered but they are not persuasive.

In response to Applicant's argument that:

> "A careful reading of these portions of Kim shows that Kim addresses the **uploading** of data from the sub processors of the BTSs to the main processor of the BSS **not** the **downloading** of data from a central buffer to distributed buffers." (See page 11 of Applicant's Remarks section)

the Examiner respectfully disagrees. Although, Kim does disclose the uploading of data from the sub processors to the main processors, Kim also discloses that data is downloaded from the main processor BSM to the medium processor BSC and from the medium processor BSC to the sub processor BTS where the data is stored (See column 1 lines 43-54 and Figure 1 of Kim for reference to downloading data from the main processor to be loaded into the sub processors). Therefore, Kim does disclose downloading of data from a central memory of the main processor to distributed memories of the sub processors.

In response to the Applicant's argument that:

> "Kim fails to teach or suggest: (1) downloading a group of blocks of data to a central buffer that services the active set of base stations; (2) for each of the active set of base stations, downloading a plurality of blocks of data of

> the group of blocks of data from the central buffer to a respective distributed buffer in the base stations; and (3) downloading a next plurality of blocks of data of the group of blocks of data from a central buffer to the respective distributed buffer for each base station of the active set of base stations as required by claim 1." (See page 12 of Applicant's Remarks section)

the Examiner respectfully disagrees. First the step of "downloading a group of blocks of data to a central buffer that services the active set of base stations" is disclosed by Haumont et al., as shown in the rejections above (See page 3 paragraph 45 to page 4 paragraph 49 and page 6 paragraph 79 for reference to downloading data packets, which form a group of blocks of data, to a memory 20, with memory 20 being in the form of a buffer that stores packets and for reference to the buffer being included in the base station controller in one embodiment). Second, the step of "for each of the active set of base stations, downloading a plurality of blocks of data of the group of blocks of data from the central buffer to a respective distributed buffer in the base stations" is disclosed by a combination of the teachings of Haumont et al. with the teachings of Kim. Haumont et al. discloses for each of the active set of base stations, downloading a plurality of blocks of data from the central buffer (See page 4 paragraph 50 to page 5 paragraph 61 and Figures 1 and 4 of Haumont et al. for reference to BSC2 transmitting data packets at various times to BTS1 and BTS2 that are determined to be in an active set for an MS1). The only part of this limitation that Haumont et al. does not disclose is the distributed buffer in the base stations. Using distributed buffers in a base station is

disclosed by Kim (See column 1 lines 15-63, column 3 line 50 to column 4 line 23, and Figure 1 of Kim for reference to a base station subsystem 1 that includes both a base station controller (BSC) 12 and a base station transceiver subsystem (BTS) 14 with data that is to be transmitted by the BTS 14 being first downloaded into a memory of the BSC 12, with this memory being equivalent to a central buffer, and then downloaded from the memory of the BSC 12 to a memory of the BTS 14, with this memory being equivalent to a distributed buffer). Therefore, the combination of the teaching of the distributed buffers, as disclosed by Kim, with the teaching of downloading block of data from a central buffer to each of an active set of base stations, as disclosed by Haumont et al., discloses the claimed limitation of "for each of the active set of base stations, downloading a plurality of blocks of data of the group of blocks of data from the central buffer to a respective distributed buffer in the base stations". Finally, the step of "downloading a next plurality of blocks of data of the group of blocks of data from a central buffer to the respective distributed buffer for each base station of the active set of base stations" is disclosed by a combination of the teachings of Haumont et al. with the teachings of Kim and the teachings of Farley et al. Haumont et al. discloses downloading data from a central buffer to base stations, as shown above. Kim discloses using distributed buffers in base stations, as also disclosed above. Farley et al. discloses that when an acknowledgment received by a sending unit specifies a packet sequence number above a threshold, which is related to a sliding window, the sliding window is moved and the next data packet is downloaded to the mobile unit **(See column 2 lines 27-48 of Farley et al. for reference to this process)**. Therefore, it is a

combination of the teachings of Haumont et al., Kim, and Farley et al. that disclose the limitation of "downloading a next plurality of blocks of data of the group of blocks of data from a central buffer to the respective distributed buffer for each base station of the active set of base stations".

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason E. Mattis whose telephone number is (571) 272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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